IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

FRODE BRAKSTAD et al.

Group Art Unit: 1612

Examiner: Gigi G. Huang

Serial No.: 10/596,224

Filed: June 5, 2006

For: FOOD AND FEED SUPPLEMENT AND ITS USE

Attorney Docket No.: VITL 0101 PUSA

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal Brief from the rejection of claims 1, 3-8 and 12-15 sustained in the Office Action dated September 16, 2009, hereinafter "the instant Office Action," for the above-identified patent application.

I. REAL PARTY IN INTEREST

The real party in interest is Pigeon Vitality AS, a corporation organized and existing under the laws of the country of Norway, and having a place of business in Porsgrunn Norway, as set forth in the assignment recorded in the U.S. Patent and Trademark Office on June 5, 2006 at Reel 017722 / Frame 0894.

II. RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences known to Appellant, the Appellant 's legal representative, or the Assignee which may be directly affected or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1, 3-8 and 12-15 are pending in this application. Claims 1, 3-8 and 12-15 have been rejected and are the subject of this appeal. Claims 2 and 9-11 have been cancelled.

IV. STATUS OF AMENDMENTS

A response with amendments to the application directed to the non-final Office Action dated April 2, 2009, was filed on June 17, 2009 and has been accepted.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The application has one (1) independent claim: claim 1.

Claim 1 recites a food and feed supplement comprising at least one C_{1-8} carboxylic acid and/or its salt as the basic ingredient (original claim 1) wherein the C_{1-8} carboxylic acid is a formic acid, a citric acid, a lactic acid, a propionic acid, an ascorbic acid, a fumaric acid, an acetic acid or a benzoic acid (paragraph [0046] of the original specification as published), the B_6, B_9 and B_{12} vitamins in a combined amount of 10-50 mg/gram dry weight of the supplement (original claim 1) to compensate for the loss of the B_6 B_9 and B_{12} vitamins due to carboxylic acid metabolism, 5-25 mg Fe/gram dry weight of the supplement (original claim 1), and 0-1 mg of an antioxidant per 100 mg dry weight of the supplement (original claim 1), the amount of the carboxylic acid and/or its salt will give a pH of 2.0-6.0 when the supplement is dissolved in water (original claim 1).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 3-8 and 12-15 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. *See* for instance pages 2-3 of the instant Office Action.

Claim 1, 3-5, 8, and 12-15 stand rejected under 35 U.S.C. § 103(a) over Bailey et al. U.S. Publication No. 2002/0150653, hereinafter *Bailey*, in view of the Food and Nutrition Board of Dietary Reference Intakes: Estimated Average Requirements for Groups, hereinafter *FNB*. *See* for instance pages 3-8 of the instant Office Action.

Claims 6-7 stand rejected under 35 U.S.C. § 103(a) over *Bailey* in view of *FNB* and further in view of Lawrence, Nutrient Requirements and Balancing Rations for Horses, hereinafter *Lawrence*. *See* for instance pages 8-9 of the instant Office Action.

VII. ARGUMENT

Carboxylic acids are known to have beneficial effects in enhancing performance of a subject including horses, dogs and pigeons. However, when pigeons and horses, for instance, are exposed to stress and competition conditions, their performance fails in spite of the fact that they are fed with a proper feed supplemented with carboxylic acids. *See* the original specification as published at paragraphs [0004], [0007], and [0011]. It is an unexpected discovery, according to one or more embodiments of the claimed invention, that the failed performance is believed to be related to the loss of three specific B vitamins B_6, B_9 and B_{12} which is in turn attributed to the metabolism of the supplemented carboxylic acids. It is a further discovery, through Appellant' extended research, that a carboxylic acid supplement be concurrently provided with an addition of these three specific B vitamins B_6, B_9 and B_{12} in a combined amount of 10-50 mg/gram of the supplement in dry weight. *Id.*

By way of example, the original specification as published in paragraphs [0028] to [0030] discloses that pigeons fed on a carboxylic acid-containing feed with a supplement according to the one or more embodiments of the present invention are shown to perform 50 percent to 500 percent better than the pigeons fed on the same carboxylic acid-containing feed but without the supplement.

By way of example, the original specification as published in paragraphs [0031] to [0035] discloses that with the employment of a supplement according to one or more embodiments of the present invention, relatively less gastric/intestinal mucosa erosions are found in test horses and relatively fewer signs of anemia are found in test dogs.

Bailey concerns compositions for supplying folate, and particularly for supplying a natural isomer of reduced folate, a folate form more abundant than the folate form currently used in certain commercial vitamin preparations. *See* Abstract and paragraphs [0006] to [0008]. Various examples of *Bailey* compositions are given to illustrate how the concept of natural isomer of reduced folates (or tetrahydrofolates) can be put into use. Example 1 relates to a ready to eat breakfast cereal containing, among other things, 0.114 mg of 5-methyl-6(s) tetrahydrofolic acid disodium salt per a 30g serving. *See* paragraph [0040]. Example 2 relates to a multivitamin tablet containing 0.437 mg of 5-methyl-6(s)- tetrahydrofolic acid magnesium salt per tablet. See paragraph [0041]. Example 3 relates to a multivitamin and minerals tablet containing 0.545 mg 5-formyl-(6s)-tetrahydrofolic acid cacium salt-pentahydrate per tablet. *See* paragraph [0042].

FNB as cited by the Examiner is a one-page reference titled "Dietary Reference Intakes (DRIs): Estimated Average Requirement for Groups." In this one-page reference, general estimated average dietary reference intake requirements are tabulated among groups categorized based on age and physiological conditions including pregnancy and lactation.

Lawrence is directed to nutritional requirements of horses in general. *See* Title. On pages 1-2 *Lawrence* discloses certain specifics of maintenance-based diet requirements and on pages 2-3 *Lawrences* discloses certain specifics of activity-based diet requirements.

A. *Claims 1, 3-8 and 12-15 Are Patentable Under 35 U.S.C. § 112, first paragraph*

The Examiner has rejected claims 1, 3-8 and 12-15 under 35 U.S.C. § 112, first paragraph, with respect to the written description requirement. *See* pages 2-3 of the instant Office Action. The Examiner argues the feature of claim 1 that B_6, B_9 and B_{12} included in a combined amount of 10-50 mg/gram to compensate for the loss of B vitamins due to carboxylic acid metabolism lacks ***express*** support in the specification.

Contrary to the above-cited assertions, written description requirement does ***not*** require a word-for-word support in the original specification, ***nor*** does it necessarily require an express support. Current MPEP examination guidelines in relevant portions provide that if a skilled artisan would have understood the inventor were in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate description requirement is met and the description need ***not*** be in *ipsis verbis* (in the same words) to be sufficient .[1]

Paragraph [0004] of the original specification as published states that addition of monocarboxylic acids generally promotes growth and reduce certain disease symptoms such as diarrhea. Paragraph [0011] states that adding monocarboxylic acid alone, however, is not without side effects, as tested animals fed on the monocarboxylic acid supplements showed fatigue, anemia and resistance to feed intake. Throughout the specification, particularly at paragraphs [0012] to

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[1] *See* MPEP 2163(II)A(3)(a).

[0016], compensatory effects of specific B vitamins namely B_6, B_9, B_{12} on the carboxylic acid supplementation are observed and stated. At paragraph [0018], it is further stated that a combined amount 10-50 mg/gram B_6, B_9 B_{12} is added to the carboxylic acid to compensate for the negative effects of the carboxylic acid in the feed supplement. Therefore, one skilled in the art would have understood at the time of filing, at least based on the above-identified description, that the inventors were in possession of the claimed feature, namely
that B_6, B_9 and B_{12} included in a combined amount of 10-50 mg/gram to compensate for the loss of B vitamins due to carboxylic acid metabolism.

Reversal of this rejection is respectfully solicited for at least the reasons set forth above.

B. ***Claims 1, 3-5, 8 and 12-15 Are Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

1. ***Claim 1 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

For one or more reasons set forth below, independent claim 1 is submitted to be patentable over the cited combination and reversal of this rejection is respectfully solicited.

Re: the limitation of the B_6, B_9, and B_{12} vitamins being in a combined amount of 10-50 mg/gram dry weight of the supplement

The Examiner admits that *Bailey* does ***not*** teach or suggest a supplement containing B_6, B_9 and B_{12} in a combined amount of 10-50 mg/gram dry weight of the supplement as recited in claim 1. *See* page 5 of the instant Office Action.

FNB fails to cure Bailey's deficiency, as *FNB* fails to teach or suggest the aforementioned limitation of claim 1. In this regard, the Examiner does ***not*** argue to the contrary. However, in maintaining the rejection, the Examiner argues that *FNB* teaches "***general estimated average*** requirements for vitamin intake for different groups, ages, and gender." *See* page 5 of the instant office action with emphasis added. According to the Examiner, recommended intakes for active agents such as vitamins are "routinely calibrated based on body weight." *See* page 6 of the instant Office Action. The Examiner therefore argues that it would be obvious to optimize the amounts of the B vitamins to produce the claimed invention. *Id.*

The Examiner's assertion is respectfully submitted to be contrary to the current MPEP examination guidelines, which in relevant portions provide that a particular parameter ***must*** first be recognized as a result-effective variable, for instance, a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.[2]

Here, as stated herein, claim 1 is reflective of Appellant's recognition of problems associated with the loss of certain specific B vitamins, namely vitamins B_6, B_9, B_{12}, attributed to carboxylic acid metabolism in a subject such as racing horses. As recited in claim 1, B_6, B_9, B_{12} in a specific combined amount of 10-50 mg/kg dry weight of the supplement are included to achieve the effect of compensating for the loss of these B vitamins.

The cited combination neither recognizes that there is a lack of certain B vitamins attributed to carboxylic acid metabolism, nor does it recognize that three specific B vitamins, B_6, B_9, and B_{12}, be supplemented in a specific combined amount to make up their loss due to carboxylic acid metabolism. In fact, the Examiner admits, as noted herein, that *FNB* merely

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[2] *See* MPEP §2144.05. *See* also *In re Antonie,* 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

teaches ***general estimated*** guidelines for vitamin intake. The cited combination fails to recognize any relationship between the three specific B vitamins and the carboxylic acid metabolism. Therefore, contrary to the Examiner's assertion, the claimed range of the vitamins B_6, B_9 and B_{12} is ***not*** a result-effective variable that may be obtainable by routine experimentation.

As stated on pages 7-8 of the instant Office Action, the Examiner argues that Appellant' remarks in relation to the lack of recognition in the art of problems associated with carboxylic acid metabolism are recitation of an intended motive and asserts that recitation of intended motivation does not have any patentable weight. Appellant respectfully submits that these remarks are provided to demonstrate Appellant' surprising recognition of the problems associated with the loss of B_6, B_9, B_{12} vitamins. The cited combination does not disclose any awareness of these problems, let alone any solutions for solving the problems. Therefore, Appellant submits these remarks to show the non-obviousness and patentability of the claim 1 over the cited combination, as a reference which does not recognize Applicant's problem ***cannot*** suggest its solution.[3]

The Examiner regards non-persuasive Appellant's remarks in relation to the lack of the result-effective variable and inapplicability of the routine experimentation doctrine. *See* page 7 of the instant application. To support this assertion, the Examiner ***merely*** provides that "the recitation of intended motivation does not have patentable weight" in a composition claim. The Examiner's assertion is conclusory in nature. Appellant's remarks are submitted to demonstrate that the routine experimentation doctrine as asserted by the Examiner does ***not*** apply, as the art is devoid of any recognition with respect of loss of specific B_6, B_9 and B_{12} vitamins attributed to carboxylic acid metabolism.

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[3] *In re Shaffer*, 229 F.2d 476, 108 USPQ 326 (CCPA 1956).

It should be noted that the International Preliminary Examining Authority has clearly appreciated the difference between the claimed invention and *Bailey*, and opines that claimed invention "differs from the teaching of the document D1 (*Bailey*) in that there is a selection of ranges of composition with respect to the amounts of B vitamins" and that "the effect of this selection is that the positive contribution of carboxylic acid can be maintained during metabolism." *International Preliminary Report on Patentability* of May 15, 2006. It is further worth noting that corresponding patents have been granted by the Patent Offices in Norway, the Netherlands, Russia, New Zealand, and South Africa. *See* Exhibit 1.

On page 8 of the instant Office Action, the Examiner however argues that prosecution by the EPO or JPO is "vastly different" from the prosecution before the U.S. PTO, therefore the argument based on favorable treatment of the claimed invention by these foreign entities is not persuasive. The fact that the claimed invention has received favorable treatment in several corresponding patent offices is submitted for the Examiner's benefit to assist in the prosecution before the U.S. Patent Office, particularly when, as here, opinions rendered by the IPEA (International Preliminary Examining Authority) and by the U.S. Patent Office are both based on the same reference *Bailey*.

Re: the limitation of one single composition containing all of
the B_6, B_9, B_{12} vitamins, an iron, a carboxylic acid, and optionally an antioxidant

The cited combination fails to teach or suggest the inclusion all of the antioxidant, the iron, the B_6, B_9, and B_{12} vitamins, and the carboxylic acid ***in a single composition***. The law is clear that ***all words*** in a claim must be considered in judging the patentability of that claim against the prior art.[4]

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[4] *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1997). *See* also MPEP 2143.03.

In paragraph [0040], *Bailey* teaches a ready-to-eat breakfast cereal which contains iron and ascorbic acid but does ***not*** seem to contain B_9, or B_{12}. Notably, and contrary to the Examiner's assertion stated on page 4 of the Office Action, 5-methyl-6(s)-tetrahydrofolic acid (III) is not a folic acid (I), commonly known as vitamin B_6. The two molecules differ structurally at the position N-5 where 5-methyl-6(s)-tetrahydrofolic acid has a methyl group and the B_6 vitamin does not. *See* col. 2 of *Bailey*. Throughout its disclosure, *Bailey* teaches using 5-methyl-6(s)-tetrahydrofolic acid (III) as a supplement and does not teach using vitamin B_6 or the folic acid (I) in its supplement. In paragraph [0041], *Bailey* teaches a multivitamin tablet which contains ascorbic acid and B_{12} but does ***not*** seem to contain iron, or B_9. In paragraph [0042], *Bailey* teaches a multivitamin and minerals tablet which contains B_{12}, ascorbic acid, and iron, but does ***not*** seem to contain B_9. In paragraph [0043], *Bailey* teaches a multivitamin and minerals tablet which contains ascorbic acid and iron, but does ***not*** seem to contain B_9, or B_{12}. In paragraph [0044], *Bailey* teaches a diet drink which contains ascorbic acid, but does ***not*** seem to contain any iron, B_9, or B_{12}.

Re: the limitation that the amount of the carboxylic acid and/or its salt will give a pH of 2.0-6.0 when the supplement is dissolved in water

The cited combination fails to teach or suggest the recited limitation that the amount of the carboxylic acid and/or its salt will give a pH of 2.0-6.0 when the supplement is dissolved in water.

In an attempt to sustaining the claim rejection, the Examiner argues that "[t]he pH of the final composition can be optimized based on the desired stability properties, preferably with acidity less than about pH4." *See* page 4 of the instant Office Action. This assertion, without more, is submitted to be merely conclusory, contrary to the MPEP examining guidelines, which in relevant portions provide that rejections on obviousness ***cannot*** be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness. *See* MPEP 2141. Therefore, a *prima facie* case of obviousness is submitted to have not been properly established at least with respect to this limitation.

The phrase "with acidity less than about pH4" as asserted by the Examiner is found once of *Bailey* in paragraph [0036]. The relevant portion of that paragraph discloses that "[c]ompositions containing 5,10-methenyl-(6R)-FH_4(VII) are most stable to oxidation when either substantially dry and/or have an acidity less than about pH4." According to *Bailey*'s own teaching in col. 2, the compound 5,10-methenyl-(6R)-FH_4(VII) is not vitamin B_6 or folic acid. Moreover, whether 5,10-methenyl-(6R)-FH_4(VII) can be rendered stable against oxidation at certain pH values has nothing to do with the amount of carboxylic acid to be provided in the folic acid-containing supplement as recited in the claims.

2. ***Claim 3 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest that iron be included in a specific amount of 0.5 to 3.5 of iron fumarate per 100 mg dry weight of the supplement as recited in claim 3. In fact, the Examiner has ***not*** specifically addressed reasons for rejecting claim 3. Accordingly, claim 3 is submitted to be independently patentable.

3. ***Claim 6 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest the method step of administering to an animal the supplement of claim 1 in an amount of 0.5 to 15 grams dry supplement per kg dry feed as recited in claim 6. The Examiner has ***not*** specifically addressed reasons for rejecting claim 6. Accordingly, claim 6 is submitted to be independently patentable.

4. ***Claim 7 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest the method step of administering to a horse 1-15 grams dry weight of the supplement of claim 1 per 100 kg horse weight in a standard feed for horses as recited in claim 7. The Examiner has ***not*** specifically addressed reasons for rejecting claim 7. Accordingly, claim 7 is submitted to be independently patentable.

5. ***Claim 8 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest the method step of administering to a human 0.1 to 4.4 mg daily of the dry weight of the supplement of claim 1 per kilogram bodyweight as recited in claim 8. The Examiner has ***not*** specifically addressed reasons for rejecting claim 8. Accordingly, claim 8 is submitted to be independently patentable.

6. ***Claim 12 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest that vitamin B_6 be provided in a specific amount of 0.07 to 24.6 mg/gram dry weight of the supplement as recited in claim 12. The Examiner has ***not*** specifically addressed reasons for rejecting claim 12. Accordingly, claim 12 is submitted to be independently patentable.

7. ***Claim 13 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest that vitamin B_9 be provided in a specific amount of 0.01 to 20.0 mg/gram dry weight of the supplement as recited in claim 13.

The Examiner has ***not*** specifically addressed reasons for rejecting claim 13. Accordingly, claim 13 is submitted to be independently patentable.

8. ***Claim 14 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest that vitamin B_{12} be provided in a specific amount of 0.33 to 120 μg/gram dry weight of the supplement as recited in claim 14. The Examiner has ***not*** specifically addressed reasons for rejecting claim 14. Accordingly, claim 14 is submitted to be independently patentable.

9. ***Claim 15 Is Separately Patentable Under 35 U.S.C. § 103(a) Over Bailey and FNB***

The cited combination does ***not*** teach or suggest that the combined amount of the vitamins B_6, B_9 and B_{12} are respectively in the range of 0.5-30 mg, 0.1-10 mg and 1-1500 μg/gram dry weight of the at least one carboxylic acid and/or its salt as recited in claim 15. In fact, the Examiner ***admits*** to that effect. *See* for instance page 5 of the instant Office Action. Moreover, the Examiner has ***not*** specifically addressed reasons for rejecting claim 15. Accordingly, claim 15 is submitted to be independently patentable.

C. ***Claims 6-7 Are Patentable Under 35 U.S.C. § 103(a) Over Bailey in view of FNB and Lawrence***

Claims 6-7 are submitted to be patentable due to their dependency from claim 1 which is now believed to be allowable in view of the remarks stated herein above relative to *Bailey* and *FNB*.

Lawrence does not cure the deficiency of *Bailey* in view of *FNB*. In fact, the Examiner cites *Lawrence* merely in an attempt to show that nutrient requirements vary with the body weight of a horse. *See* page 7 of the Office Action dated April 2, 2009.

Moreover, *Lawrence* ***teaches away*** from the claimed invention. In section 4 of page 2 with relevant portions thereof reproduced below, *Lawrence* teaches the B complex vitamins are synthesized in the horse's digestive tract and supplements are ***not*** needed for horses consuming maintenance diets. Teaching away is strong evidence of non-obviousness.[5]

> Section 4 on page 2 of *Lawrence* provides, with emphasis added:
>
> The vitamin needs for maintenance of mature horses will usually be satisfied by high quality fresh forages. Horses receiving hay for extended periods should receive supplemental vitamin A and E. Vitamin A activity is lost in hay during storage and vitamin E values vary considerably among forages. Vitamin D is provided by exposure of horses to sunlight and by sun-cured hays. The B vitamins are synthesized in the horse's digestive tract and supplements are ***not*** needed for horses consuming maintenance diets. For more information on vitamins, ***see Table 6***.

On page 9 of the instant Office Action, the Examiner asserts that the above-cited passage of *Lawrence* is only directed to mature horses with high quality fresh forages and therefore, Lawrence's teaching of not to supplement B vitamins, according to the Examiner, does not apply to all horses such as horses under training conditions. Appellant respectfully traverses this assertion as follows.

Lawrence is directed to nutrient requirements for horses. *See* Title. On page 1, *Lawrence* discloses that forage is the basis of diets for all horses. As stated herein above, *Lawrence* teaches that there is no B vitamin supplement for horses on maintenance diets.

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[5] *W.L. Gore v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir., 1983).

Lawrence also extends the teaching of no-B vitamin-supplement to other horses including the working horses, contrary to the Examiner's assertion. *See* for instance page 2, where *Lawrence* teaches that exercise may increase the energy expenditure of the horse, however exercise has ***little*** effect on other nutrients with the exception of water and electrolytes such as sodium, potassium, chloride and calcium.

On page 9 of the instant Office Action, the Examiner further asserts that Table 6 teaches B vitamin supplement in horses, with particular reference to thiamin and riboflavin. Appellant respectfully traverses this assertion as follows.

Note that Table 6 is referenced exactly in the passage where *Lawrence* teaches no B vitamin supplement is needed for horses fed on fresh forage. *See* the passage reproduced herein above. Consistent with the disclosure of no B vitamin supplement, Table 6 teaches that vitamin A needs to be supplemented in the diet for lactating horses; that vitamin D needs to be supplemented in the diet for both the lactating horses and the growing horses; that vitamin E needs to be supplemented in the diet for all the lactating horses, the growing horses, and the working horses. Consistent with the passage, and contrary to disclosure on diet supplements for vitamin A, D, and E, *Lawrence* in Table 6 teaches that ***no*** B supplement is needed, evidenced for instance by a same amount of riboflavin for all the horses listed. Note that the values listed in the second column termed "maintenance" are the base values, any amount in excess indicates that a supplement is needed. For riboflavin, a 2 mg/kg value is provided in the maintenance diet, the same amount of 2 mg/kg is all that is needed for all the other horses listed. Therefore, no additional amount or no supplement of riboflavin is disclosed according to Table 6, contrary to the Examiner's assertion.

For at least the reasons set forth above, reversal of this rejection of claims 6-7 is independently solicited.

The Appeal Brief fee of *$270.00* is being charged to Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. The Commissioner is hereby authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Deposit Account No. 02-3978.

Respectfully submitted,

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Enclosure - Appendices

VIII. CLAIMS APPENDIX

1. A food and feed supplement containing vitamins, for improvement of health and performance, the supplement comprising:

at least one C_{1-8} carboxylic acid and/or its salt as the basic ingredient wherein the C_{1-8} carboxylic acid is a formic acid, a citric acid, a lactic acid, a propionic acid, an ascorbic acid, a fumaric acid, an acetic acid or a benzoic acid;

the B_6, B_9, and B_{12} vitamins in a combined amount of 10-50 mg/gram dry weight of the supplement to compensate for the loss of B_6, B_9, and B_{12} vitamins due to carboxylic acid metabolism;

5-25 mg Fe/gram dry weight of the supplement; and

0-1 mg of an antioxidant per 100 mg dry weight of the supplement, the amount of the carboxylic acid and/or its salt will give a pH of 2.0-6.0 when the supplement is dissolved in water.

3. Supplement according to claim 1, characterized in that it contains 0.5-3.5 mg of iron fumarate per 100 mg dry weight of the supplement.

4. Supplement according to claim 1, characterized in that the supplement contains vitamin E as an antioxidant.

5. Supplement according to claim 1, characterized in that it contains a desiccant.

6. A method for improving the performance of an animal during stress and competition conditions, the method comprising:

administering to the animal the supplement of claim 1 in an amount of 0.5-15 grams dry supplement/kg dry feed.

7. A method for improving the performance of a horse during stress and competition conditions, the method comprising:

administering to the horse 1-15 grams dry weight of the supplement of claim 1 per 100 kg horse weight in a standard feed for horses.

8. A method of improving performance of a human during stress and competition conditions, the method comprising:

administering to the human 0.1-4.4 mg daily of the dry weight of the supplement of claim 1 per kilogram bodyweight.

12. The supplement of claim 1, wherein the B_6 vitamin is an amount of 0.07-24.6 mg/gram dry weight of the supplement.

13. The supplement of claim 1, wherein the B_9 vitamin is an amount of 0.01.-20 mg/gram dry weight of the supplement.

14. The supplement of claim 1, wherein the B_{12} vitamin is an amount of 0.33-120 μg/gram dry weight of the supplement.

15. The supplement of claim 1, wherein the combined amount of the vitamins B_6, B_9 and B_{12} are respectively in the range of 0.5-30 mg, 0.1-10 mg and 1-1500 μg/gram dry weight of the at least one carboxylic acid and/or its salt.

IX. EVIDENCE APPENDIX

Exhibit I attached hereto, was first submitted via Appellant's Amendment dated June 17, 2009 and was entered in the record by the Examiner pursuant to the Office Action dated September 16, 2009.

X. RELATED PROCEEDINGS APPENDIX

None.

EXHIBIT 1

[redacted]

URKUNDE

Es wird hiermit bescheinigt, dass für die in der Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.

CERTIFICATE

It is hereby certified that a European patent has been granted in respect of the invention described in the patent specification for the Contracting States designated in the specification.

CERTIFICAT

Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet, pour les Etats contractants désignés dans le fascicule de brevet.

Europäisches Patent Nr.	European patent No.	Brevet européen n°
	1691626	

Patentinhaber	Proprietor of the patent	Titulaire du brevet

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25.02.09

PA/EPO/OEB 2031 07.07

INFORMATION SHEET

LETTERS PATENT

European Patent Number 1691626

EP Patent Ex PCT Regional Phase

Owner(s):	Vitality Innovation AS, Frode Brakstad, Morten Harrington Raaholt
Inventor(s):	Frode Brakstad, Morten Harrington Raaholt
Subject:	Food and feed supplement and its use
K&S reference:	P41023EP-K
Your reference:	Not Known
Application No.	04808868.6
Publication No.	1691626
Registration No.	1691626
PCT Application No.	PCT/NO2004/000374
PCT Publication No.	WO 2005/053423
Earliest priority date:	5 December 2003
Date of filing of PCT:	6 December 2004
Filing date:	29 June 2006
Date of grant:	25 February 2009

TERM

The patent will expire on 6 December 2024 subject to payment of annual renewal fees.

OPPOSITION

Until 25 November 2009 any person may give notice to the European Patent Office of opposition to the European Patent Granted.

KONGERIKET NORGE
The Kingdom of Norway

Registreringsbrev

Certificate of Registration

Patent nr.: 320989
Patent No.

I henhold til patentloven av 15 desember 1967 er Deres patent meddelt med opplysninger som angitt i vedheftet patentskrift.

This is to certify that the Norwegian Patent Office, in accordance with the Patents Act No. 9 of 15 December 1967, has granted a patent for the enclosed invention

Jorgen Smith
direktor

[redacted]

Certified Netherlands translation of a European Patent (Art 65 EPC)

Patent number	1691626
Patentee	Vitality Innovation AS; Morten Harrington Rasholt; Frode Brakstad
Application filed on	6 December 2004
Application number	04808868.6
Patent mentioned in European Patent Bulletin	25 February 2009
Patent will expire on	6 December 2024
Annuities for maintaining the patent will be due on	31 December

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Filing date of certified Netherlands translation	7 April 2009

in /ehe

LETTERS PATENT

Number **548162**

ELIZABETH THE SECOND, by the Grace of God Queen of New Zealand and Her Other Realms and Territories, Head of the Commonwealth, Defender of the Faith; To all to whom these presents shall come, Greeting:

WHEREAS pursuant to the Patents Act 1953 an application has been made for a patent of an invention for

Food and feed supplement and its use

(more particularly described in the complete specification relating to the application)

AND WHEREAS

VITALITY INNOVATION AS, Stavernsveien 2, 3264 Larvik, Norway

(hereinafter together with his or their successors and assigns or any of them called "the patentee") is entitled to be registered as the proprietor of the patent hereinafter granted:

Address for service: PIPERS, Level 1, 5A Pacific Rise, Mt Wellington, Auckland, New Zealand

NOW, THEREFORE, We by these letters patent give and grant to the patentee our special licence, full power, sole privilege, and authority, that the patentee by himself, his agents, or licensees and no others, may subject to the provisions of any statute or regulation for the time being in force make, use, exercise and vend the said invention within New Zealand and its dependencies during a term of twenty years from 6 December 2004 and that the patentee shall have and enjoy the whole profit and advantage from time to time accruing by reason of the said invention during the said term:

AND WE strictly command all our subjects whomsoever within New Zealand and its dependencies that they do not at any time during said term either directly or indirectly make use of or put into practice the said invention, nor in any way imitate the said invention without the consent, licence, or agreement of the patentee in writing under his hand, on pain of incurring such penalties as are prescribed by law and of being answerable to the patentee according to law for his damages thereby occasioned:

PROVIDED ALWAYS:

(1) That these letters patent shall determine and become void if the patentee does not from time to time pay the renewal fees prescribed by law in respect of the patent:

(2) That these letters patent are revocable on any of the grounds prescribed by the Patents Act 1953 as grounds for revoking letters patent:

(3) That nothing in these letters patent shall prevent the granting of licences in the manner in which and for the considerations on which they may by law be granted:

(4) That these letters patent shall be construed in the most beneficial sense for the advantage of the patentee.

IN WITNESS whereof We have caused these letters patent to be signed and sealed on 11 December 2008 with effect from 6 December 2004.

COMMISSIONER OF PATENTS, TRADEMARKS & DESIGNS
NEW ZEALAND

Neville Harris
Commissioner of Patents, Trade Marks and Designs

REPUBLIC OF SOUTH AFRICA

REPUBLIEK VAN SUID AFRIKA

PATENTS ACT, 1978

CERTIFICATE

In accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that

[redacted]ON VITALITY AS BRAKSTAD, Frode RAAHOLT, Morten, Harrington

has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2006/5543

A copy of the complete specification is annexed, together with the relevant Form P2.

In testimony thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the **26th** day of **September 2007**

.....

Registrar of Patents

**FEDERAL SERVICE FOR INTELLECTUAL PROPERTY,
PATENTS AND TRADE MARKS
(ROSPATENT)**
30-1, Berezhkovskaya nab., 123995, Moscow Phone (499) 240-60-15, fax (495) 234-30-58

To No. **9-4607 of**
(21) Our ref. **2006123220/13 (025193)**

To: NEVINPAT, P.O.Box 24,
191036, St. Petersburg
Attn. Polikarpov A.V.

February 24, 2009

**DECISION TO GRANT
A PATENT FOR AN INVENTION**

(21) Application No.: **2006123220/13 (025193)** (22) Filing date: **06.12.2004**

As a result of substantive examination it has been established that

[ ] the claimed invention
[x] the claimed group of inventions

satisfies the requirements and patentability criteria set forth in the Civil Code of the Russian Federation. In view of the aforesaid the decision to grant a patent for invention is issued.

The decision issued on the basis of the substantive examination is enclosed.

Encl.: Decision on 5 pages in one copy

DECISION ISSUED ON THE BASIS OF EXAMINATION

(21) Application No.: **2006123220/13 (025193)** (22) Filing date: **06.12.2004**

(24) Date of beginning of the patent validity: **06.12.2004**
(85) Date of entering the national phase: **05.07.2006**

PRIORITY IS ESTABLISHED ON THE BASE OF

[ ] (22) filing date
[ ] (23) date of receipt of additional materials of
to an earlier application No. filed on
[ ] (62) [ ] priority date of application No. filed on
from which said application is divided
[ ] filing date of application No filed on
from which said application is divided
[ ] (66) filing date of an earlier application No. filed on

[ ] (30) Primary application filing date

(31) Priority application No	(32) Priority date	(33) Country of priority
20035410	**05.12.2003**	**NO**

(86) PCT Application No. PCT/NO2004/000374 of 06.12.2004
(87) International publication number and date WO2005/053423 of 16.06.2005

(72) Inventor(s)
BRAKSTAD, Frode; RAAHOLT, Morten, Harrington, NO
(73) Patent owner(s)
Pigeon Vitality AS, NO
(54) Title of the invention

FOOD AND FEED SUPPLEMENTS AND THEIR USE

04 2	14.10.2008	134901

As a result of substantive examination conducted in relation to
[ ] the originally filed claims
[x] the claims amended by the Applicant

it has been established that

[ ] the invention
[x] the group of inventions

satisfies the requirements and patentability criteria set forth in Articles 1349 and 1350 of the Civil Code of the Russian Federation.

The accepted claims are presented on pages 3, 4.

The title of the invention has been corrected by the Examiner in accordance with the amended claims.

The disclosure originally corrected by the Applicant will be published.

Encl.: Abstract corrected by the Examiner.